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Access to database of BAC-Cre driver lines

Instructions are provided as a PDF

Information for BAC-Cre lines for selected Brain Systems are provided as a PDF

Database of GENSAT BAC-Cre driver lines

Database of high resolution images of brain sections expressing Cre recombinase.
Expression patterns may be selected and compared by brain system.

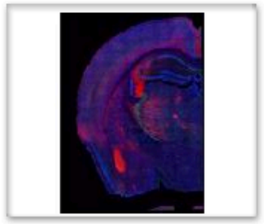
Instructions: PDF file of instructions to use this website
Brain Systems: PDF files of information on brain systems and Cre-driver lines

Search Brain Database: access to Cre-driver line database

Cre lines may also be accessed through GENSAT database: http://www.gensat.org/cre.jsp

Link to GENSAT DATABASE Cre Page

contact: Chip Gerfen, Laboratory of Systems Neuroscience, NIMH: gerfenc@mail.nih.gov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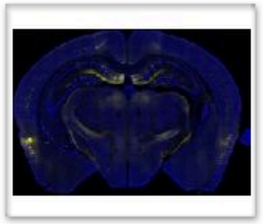
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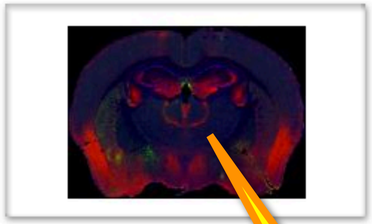
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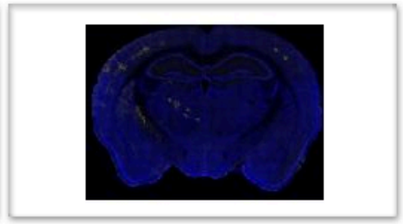
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Double click on thumbnail anywhere in the website to view at higher magnification

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Click: Select All to select all LEVELS

Use KeyWord: to select Cre lines to be listed under: LINES

KeyWord:
00 ***GENSAT Cre lines***

lists all GENSAT Cre driver lines

named by:
GeneDriver_specific line

(ie: Adora2a_KG126)

To select LINES to be displayed, check individual boxes or

check : Select All to display all lines for KeyWord

NOTE: clicking on LINE in list directly pulls up all images for that line

Select Cre driver line(s): default lists all lines or select by Keyword for lines with expression in specific brain system

Select the coronal levels to display by checking boxes) : default provides 1 level in 5, All Levels option allows selection from all

KeyWord: 00 ***GENSAT Cre lines***

KeyWord:

KeyWord:

LINES Select All Unselect All

Selects all Lines listed for keyword

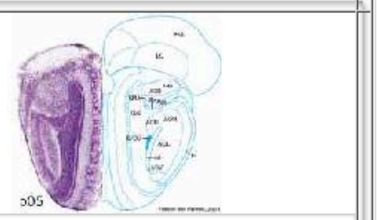
- A2365H16Rik_RA31
- A8300**Rik_KJ227 cortex layer 5
- Adora2a_KG126 indirect striatal p
- Adora2a_KG139 indirect striatal pathway
- Amigo1_NP210
- Arpp21_OL90
- Ascl1_ND216
- Avp_QZ27
- Bsx_NS106
- Ccdc3_PO34
- Cdhr1_KG66 olfactory bulb mitral cells
- Cdhr1_KG76
- Chrna2_OE25
- Chrna3_NO196
- Chrna7_NP366
- hrnm2_KD18 cortex and habenula
- Cort_IM42 mammillary nuclei / STN

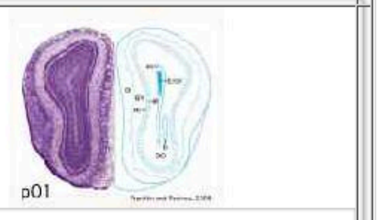
Select All Unselect All

LEVELS All Levels **DESCRIPTION**

c5	c05 olfactory bulb
c10	c10 frontal cortex
c15	c15 frontal cortex
c20	c20 accumbens
c25	c25 striatum
c30	c30 septal area
c35	c35 globus pallidus
c40	c40 hypothalamus
c45	c45 thalamus
c50	c50 hippocampus
c55	c55 midbrain
c60	c60 substantia nigra
c65	c65 colliculus
c70	c70 dorsal raphe
c75	c75 PPN
c80	c80 brainstem
c85	locus coeruleus
c90	c90 cerebellum
c95	c95 cerebellum
c100	

Place mouse over Level description to change image.





Display Slides

Results display lines in rows

Results display lines in columns

Two options for display, Lines listed in rows or Lines listed in columns

After making selections of LINES and LEVELS

click on Display Slides

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Compare Slides

Various slides can be compared (at different magnifications, etc) by clicking in the checkbox to select the slide and pressing the "Compare Slides" button.

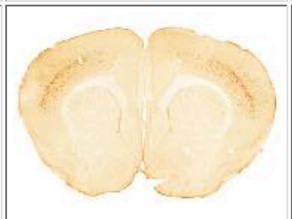
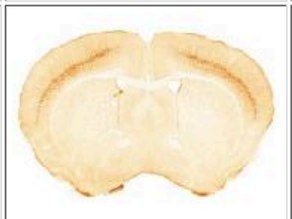
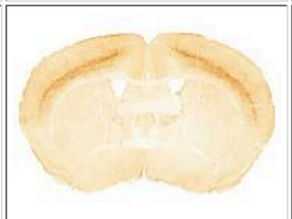
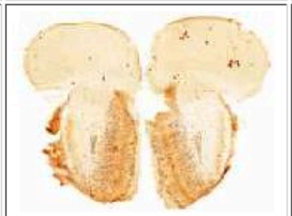
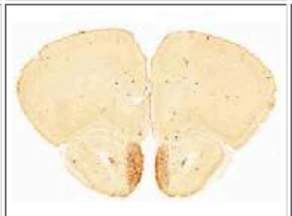
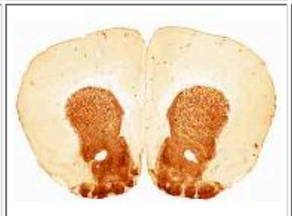
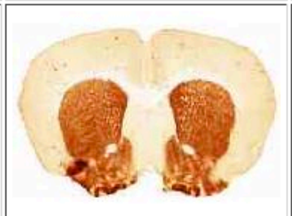
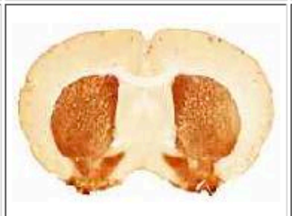
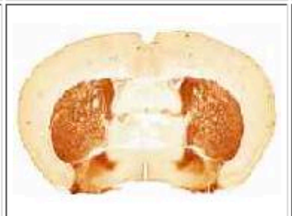
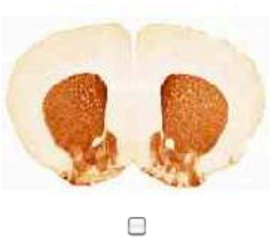
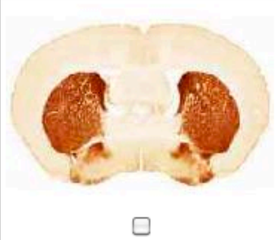
Only two or four slides are allowed to be compared at any given time.

Compare Selected Slides

Clear all Selections

All Cre lines are displayed in rows with images through levels

scroll to left and down to see full matrix of images

Line	c1 - c5	c6 - c10	c11 - c15	c16 - c20	c21 - c25	c26 - c30	c31 - c35
A2365H16Rik_RA31							
A8300**Rik_KJ227							
Adora2a_KG126							
Adora2a_KG139	no image available						
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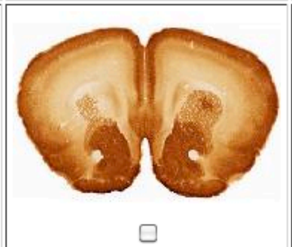
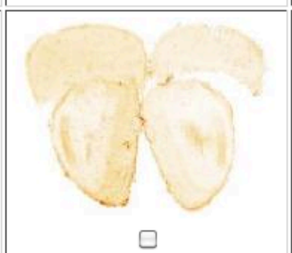
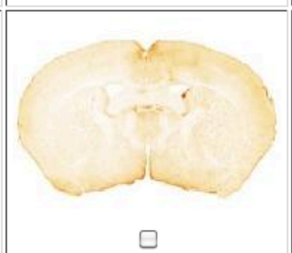
Arpp21_OL90							
Ascl1_ND216							

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KeyWord:

2 basal ganglia circuits

Select Cre driver line(s): default lists all lines or select by Keyword for lines with expression in specific brain system

Select the coronal levels to display by checking box(es) : default provides 1 level in 5, All Levels option allows selection from all

KeyWord: 2 basal ganglia circuits

KeyWord:

KeyWord:

LINES Select All Unselect All

A8300**Rik_KJ227	cortex layer 5
Adora2a_KG126	indirect striatal pathway
Adora2a_KG139	indirect striatal pathway
by_Glt25d2_NF107	
Dbp_MN120	
Dlx5_MO36	GABA interneurons
Drd1a_EY217	direct striatal pathway
Drd1a_EY266	accumbens shell // amygdala i...
Drd3_KI196	
Drd3_KJ291	accumbens
Drd3_KJ302	accumbens and cortex layer 2/3
Gabrr3_KC112	
Gng7_KH71	direct and indirect striatal p...
Gpr26_KO250	cortex layer 5 and thalamus
Gpr26_KO273	cortex layer 4
Grp_KH288	frontal cortical areas
Grp_KH288i	

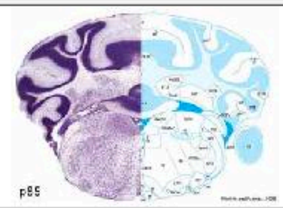
Select All Unselect All

LEVELS All Levels **DESCRIPTION**

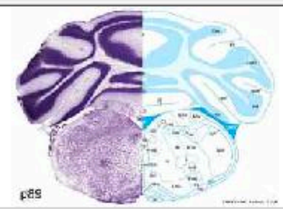
c5	c05 olfactory bulb
c10	c10 frontal cortex
c15	c15 frontal cortex
c20	c20 accumbens
c25	c25 striatum
c30	c30 septal area
c35	c35 globus pallidus
c40	c40 hypothalamus
c45	c45 thalamus
c50	c50 hippocampus
c55	c55 midbrain
c60	c60 substantia nigra
c65	c65 colliculus
c70	c70 dorsal raphe
c75	c75 PPN
c80	c80 brainstem
c85	locus coeruleus
c90	c90 cerebellum
c95	c95 cerebellum
c100	

Place mouse over Level description to change image.

c80 brainstem



locus coeruleus



c90 cerebellum

Display Slides

Results display lines in rows

Results display lines in columns

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Example of searching by brain system.

In this case Cre drivers with expression in basal ganglia circuits are listed

Specific lines selected by checking boxes next to LINES with expression in areas of interest

Specific LEVELS are selected by checking boxes at levels in areas of interest

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Compare Slides

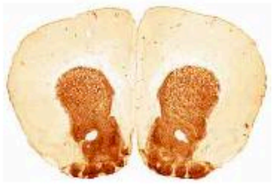
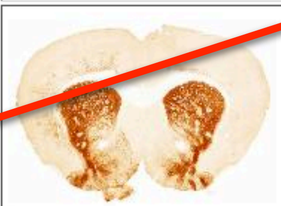
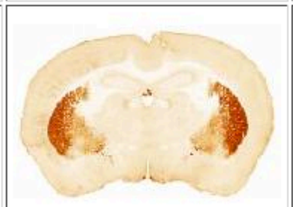
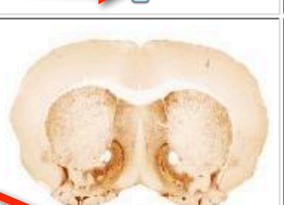
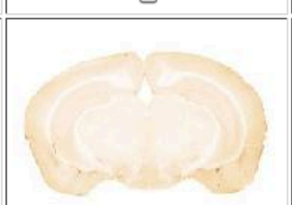
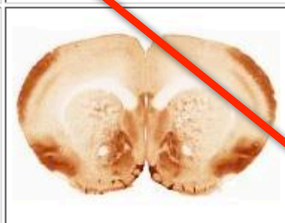
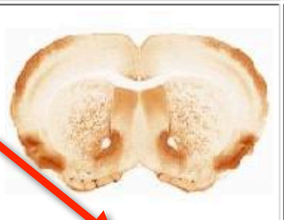
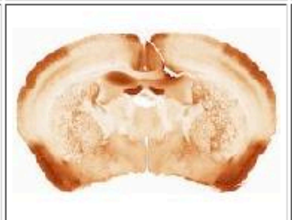
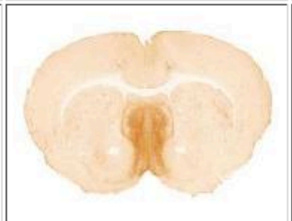
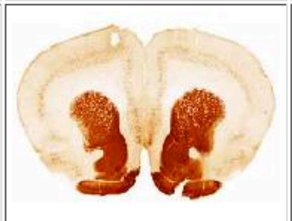
Various slides can be compared (at different magnifications, etc) by clicking in the checkbox to select the slide and pressing the "Compare Slides" button.

Only two or four slides are allowed to be compared at any given time.

Compare Selected Slides

Clear all Selections

Check up to 4 thumbnails and then click : Compare Selected Slides

Line	c16 - c20	c21 - c25	c31 - c35	c36 - c40	c41 - c45	c51 - c55	c56 - c60
Adora2a_KG126							
Drd1a_EY217							
Drd1a_EY266							
Drd3_KJ302							
Gabrr3_KC112							
Gng7_KH71							
Grp_KH288							

Grouping of Slides

Use the group slide button to link the slides.

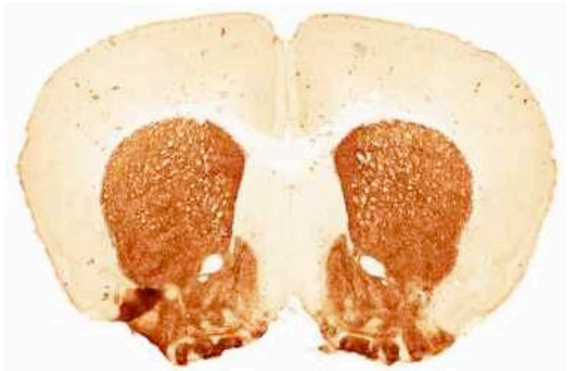
Make sure that all linked slides have the same magnification.

Group Slides

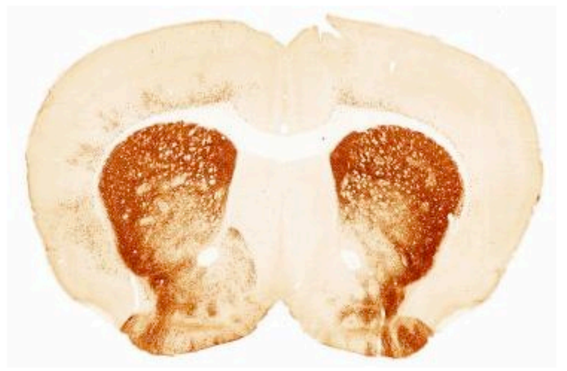
Thumbnails selected in previous page are displayed

Click : Group Slides

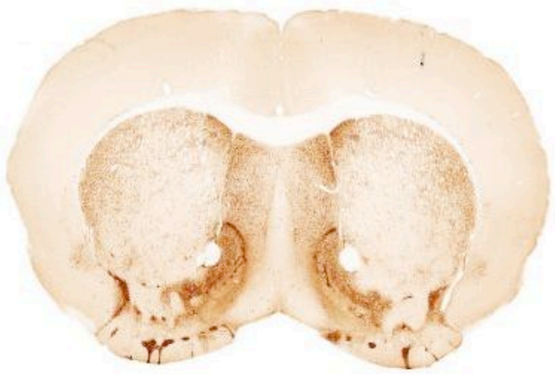
this allows images to be magnified and moved together



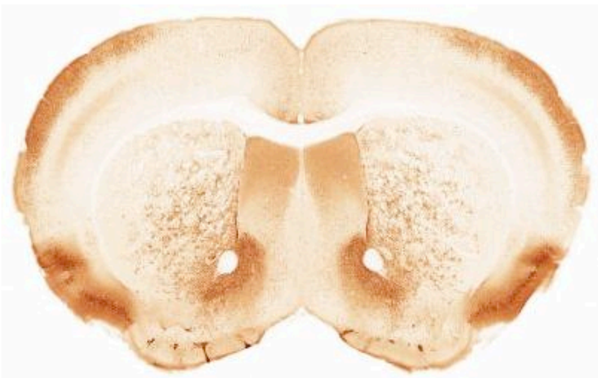
a_Adora2a_KG126_2972_p23.pff Take a snapshot



a_Drd1a_EY217_2098_p25.pff Take a snapshot



a_Drd1a_EY266_2261_p25.pff Take a snapshot



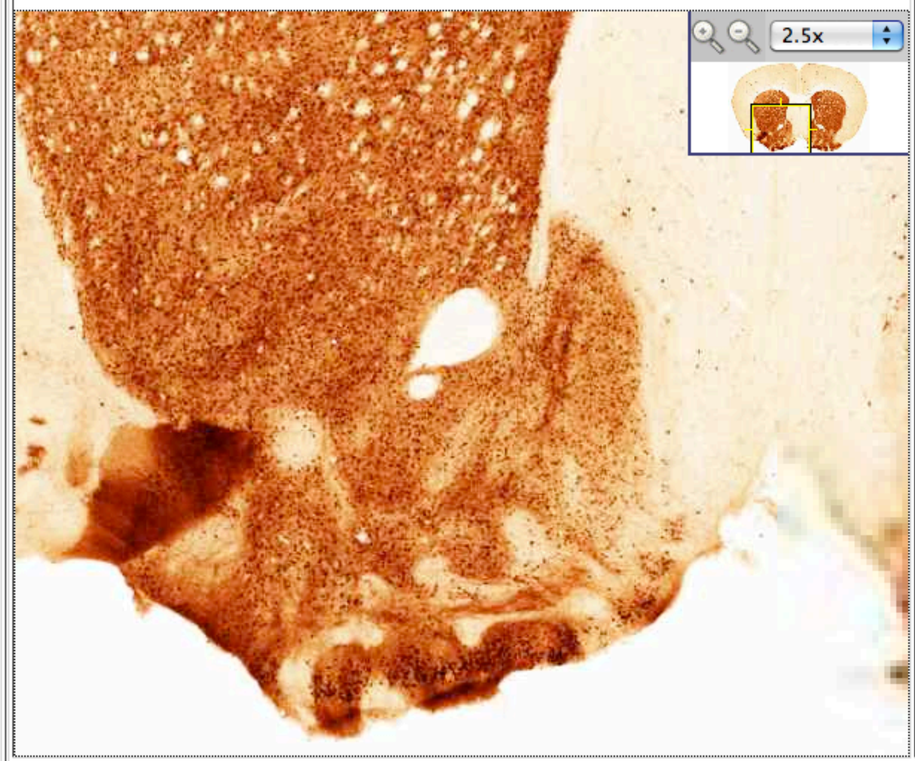
a_Drd3_KJ302_1860_p25.pff Take a snapshot

Grouping of Slides

Use the group slide button to link the slides.

Make sure that all linked slides have the same magnification.

Ungroup Slides



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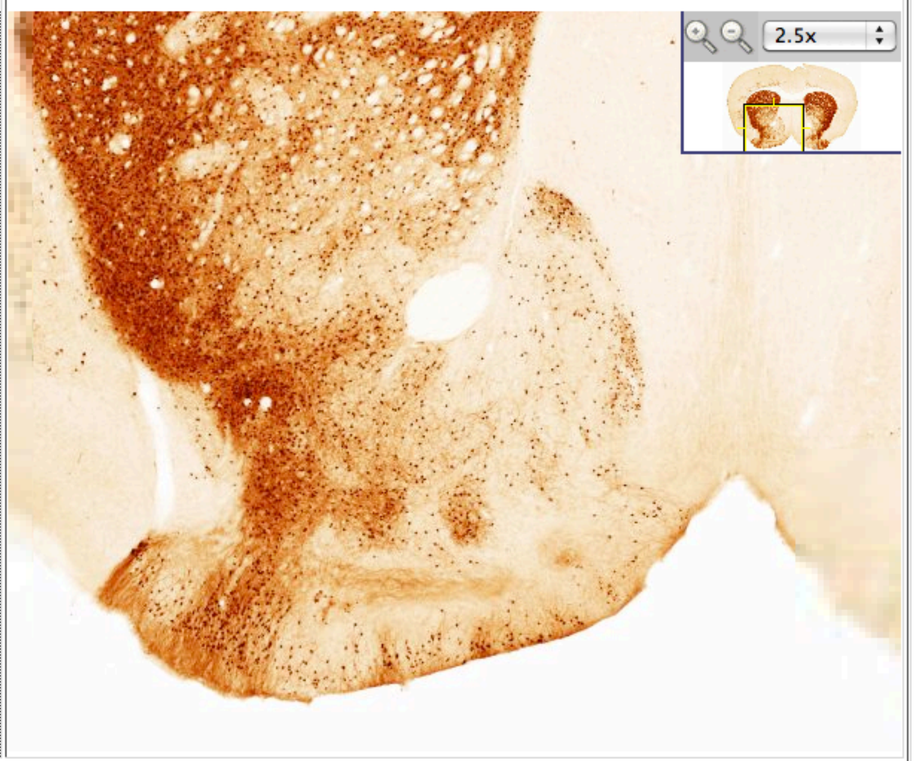
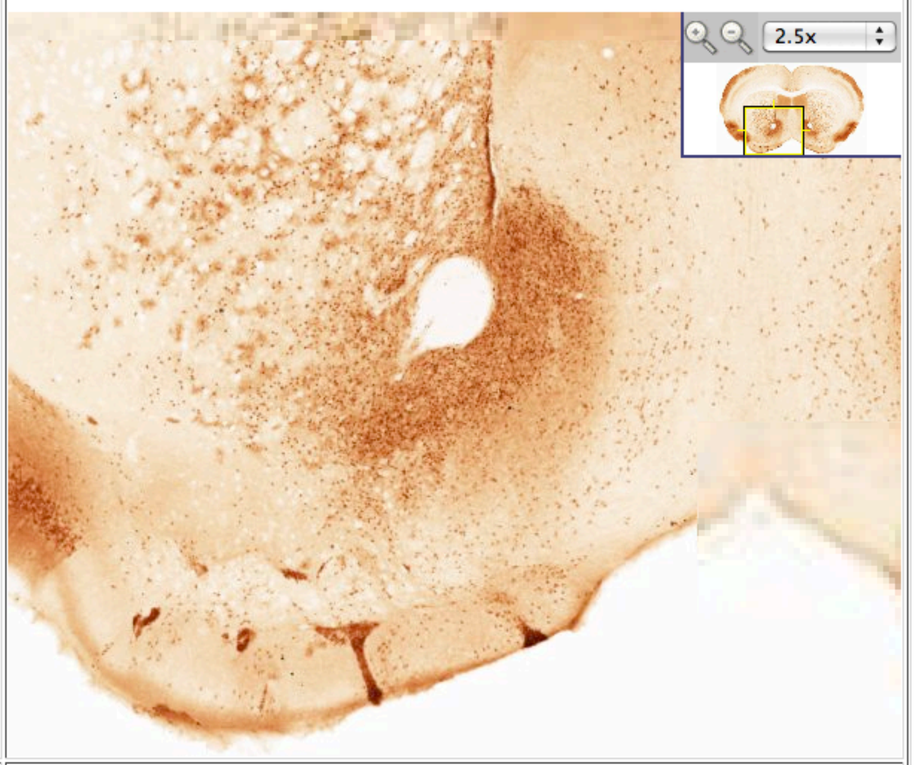


a_Drd1a_EY217_2098_p25.pff Take a snapshot

a_Drd1a_EY266_2261_p25.pff Take a snapshot



a_Drd3_KJ302_1860_p25.pff Take a snapshot

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Compare Selected Slides

Clear Selections

After using Keyword: hippocampus and selecting all lines

Select thumbnails to compare hippocampal Cre expression in these 4 lines

Line	c26 - c30	c31 - c35	c36 - c40	c41 - c45	c46 - c50	c51 - c55	c56 - c60
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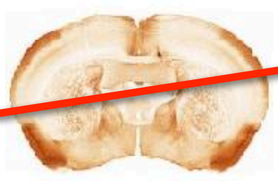
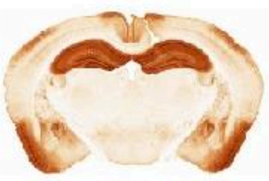
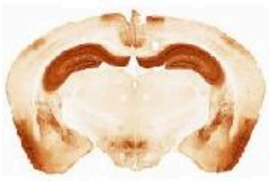
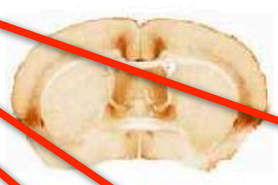
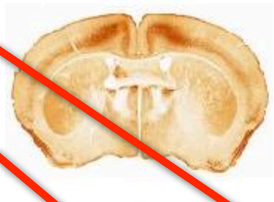
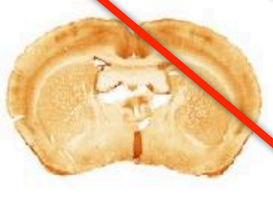
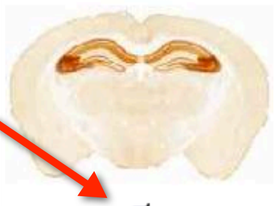
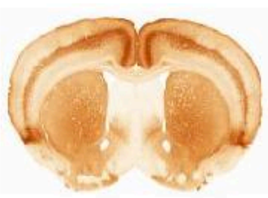
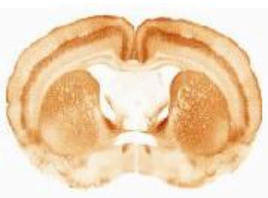
Drd3_KJ302							
Epyc_KR363							
Gpr26_KO250							
Klk8_NP157			no image available				
Mpp3_KG118			no image available				
Rbp4_KL100							

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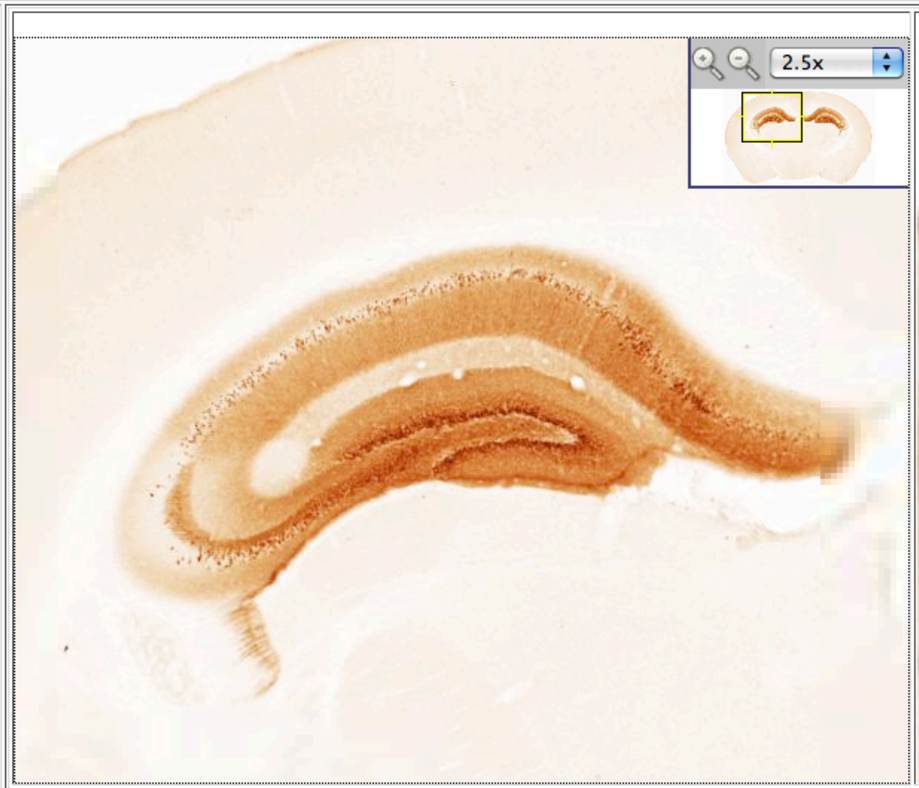
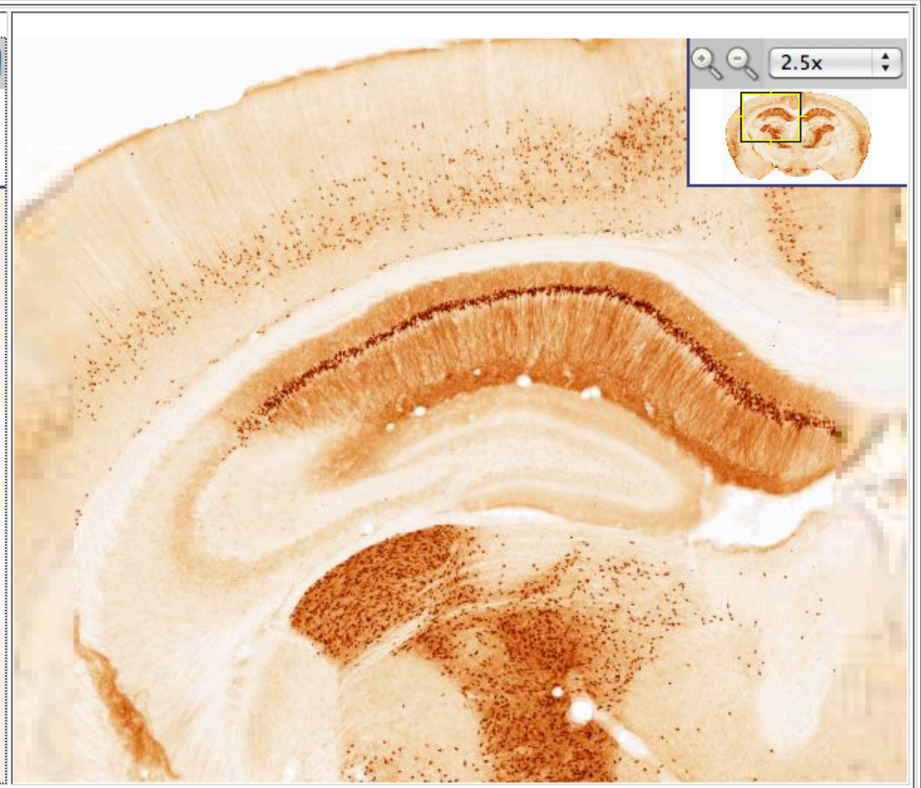
Use the group slide button to link the slides.

Make sure that all linked slides have the same magnification.

Ungroup Slides



a_Drd3_KI198_1556_p50.pff Take a snapshot



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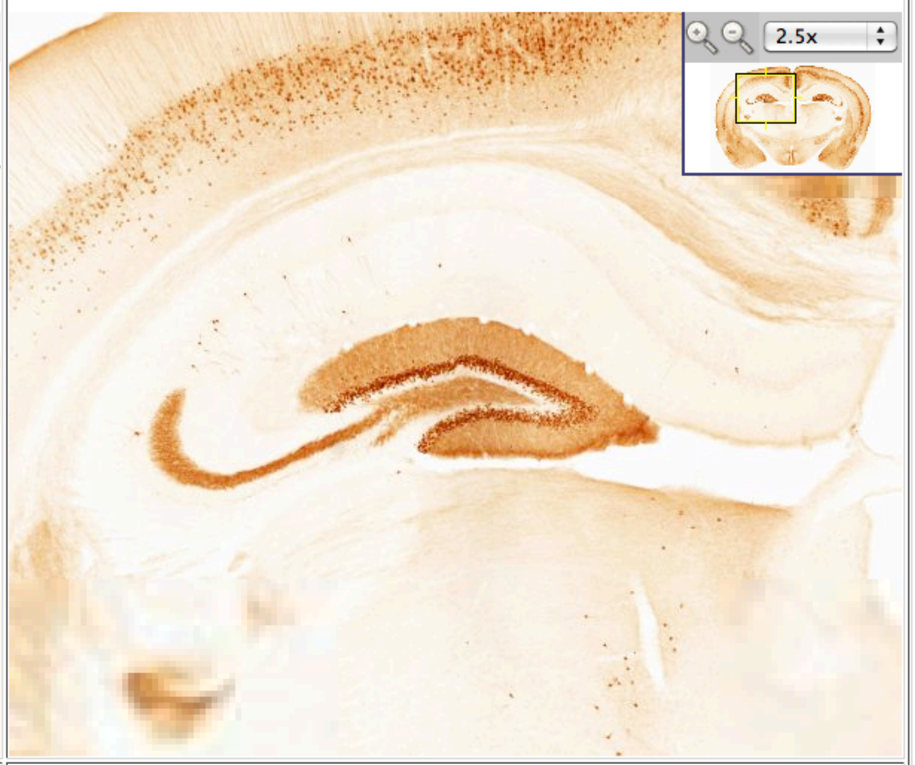
a_Mpp3_KG118_99_p48.pff Take a snapshot



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Some Cre lines are imaged with Nissl

Cre expression is pseudocolored in yellow

Nissl is displayed in Blue

Select Cre driver line(s): default lists all lines or select by Keyword for lines with expression in specific brain system

Select the coronal levels to display by checking box(es) : default provides 1 level in 5, All Levels option allows selection from all

KeyWord: 00a Cre with nissl

KeyWord:

Ord:

LINES Select All Unselect All

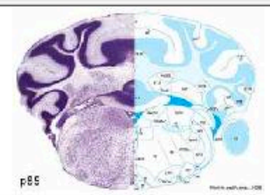
- by_Efr3a_NO108
- by_Glt25d2_NF107
- by_Sim1_KJ18
- by_Tlx3_PL56
- zKH288_Ycre/Bnissl
- zNO14_Ycre/Bnissl

Select All Unselect All

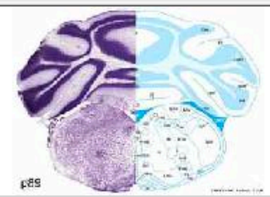
LEVELS	All Levels	DESCRIPTION
c5		c05 olfactory bulb
c10		c10 frontal cortex
c15		c15 frontal cortex
c20		c20 accumbens
c25		c25 striatum
c30		c30 septal area
c35		c35 globus pallidus
c40		c40 hypothalamus
c45		c45 thalamus
c50		c50 hippocampus
c55		c55 midbrain
c60		c60 substantia nigra
c65		c65 colliculus
c70		c70 dorsal raphe
c75		c75 PPN
c80		c80 brainstem
c85		locus coeruleus
c90		c90 cerebellum
c95		c95 cerebellum
c100		

Place mouse over Level description to change image.

c80 brainstem



locus coeruleus



c90 cerebellum

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Results display lines in rows

Results display lines in columns

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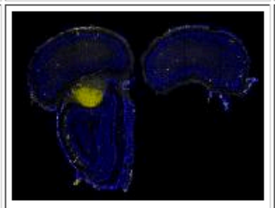
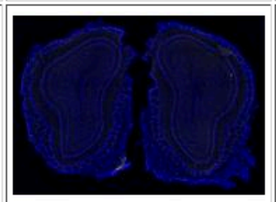
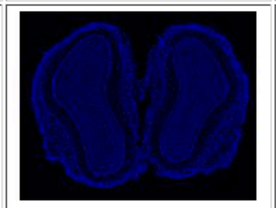
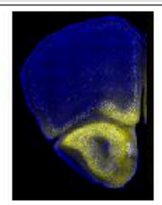
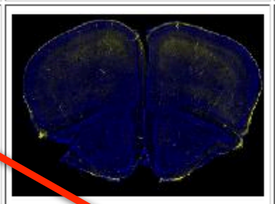
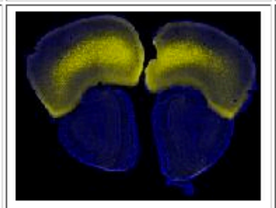
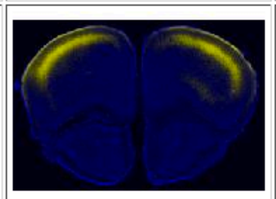
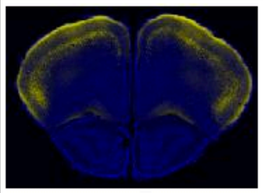
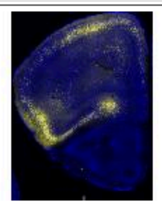
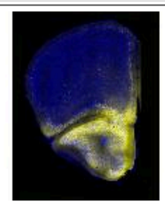
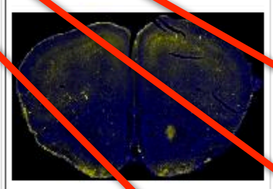
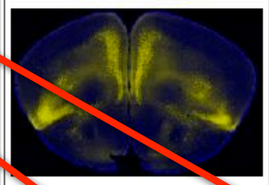
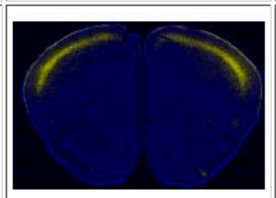
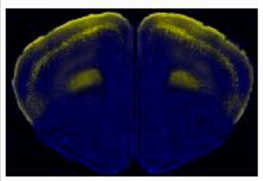
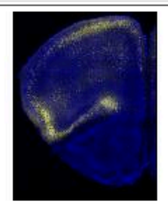
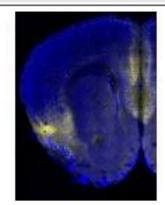
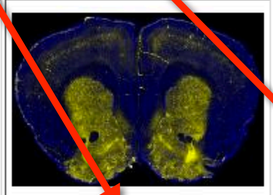
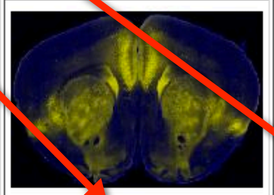
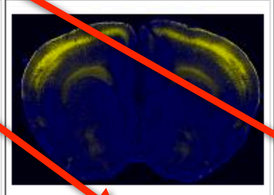
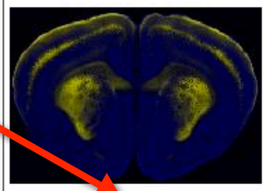
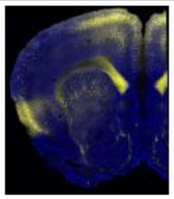
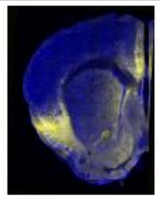
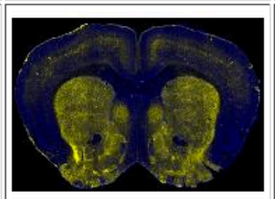
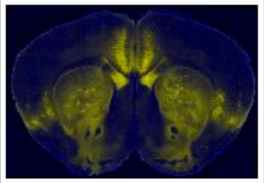
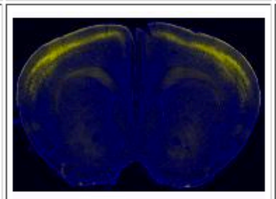
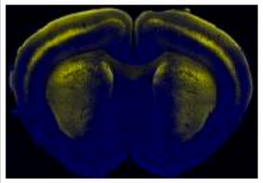
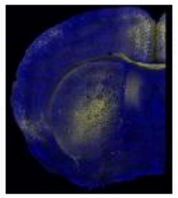
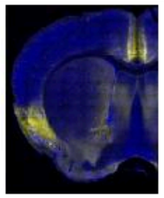
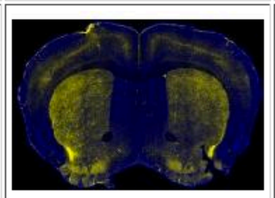
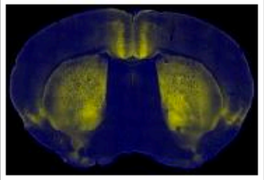
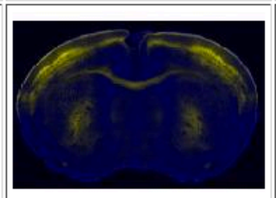
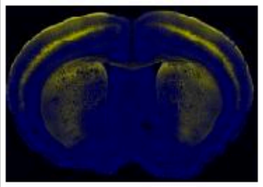
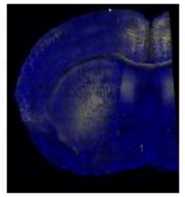
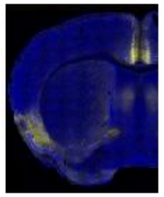
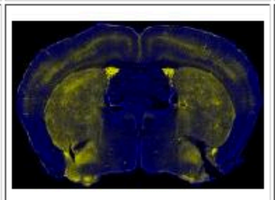
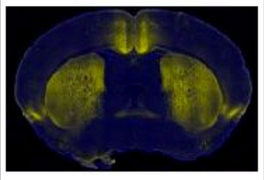
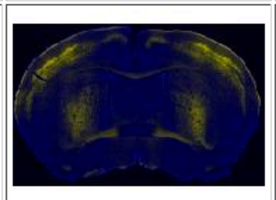
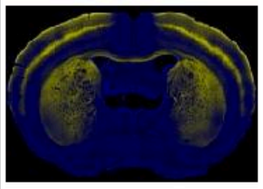
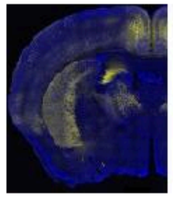
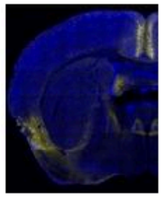
Level	by_Efr3a_NO108	by_Glt25d2_NF107	by_Sim1_KJ18	by_Tlx3_PL56	zKH288_Ycre/Bnissl	zNO14_Ycre/Bnissl
c1 - c5			no image available		no image available	
c6 - c10						
c11 - c15						
c16 - c20						
c21 - c25						
c26 - c30						
c31 - c35						

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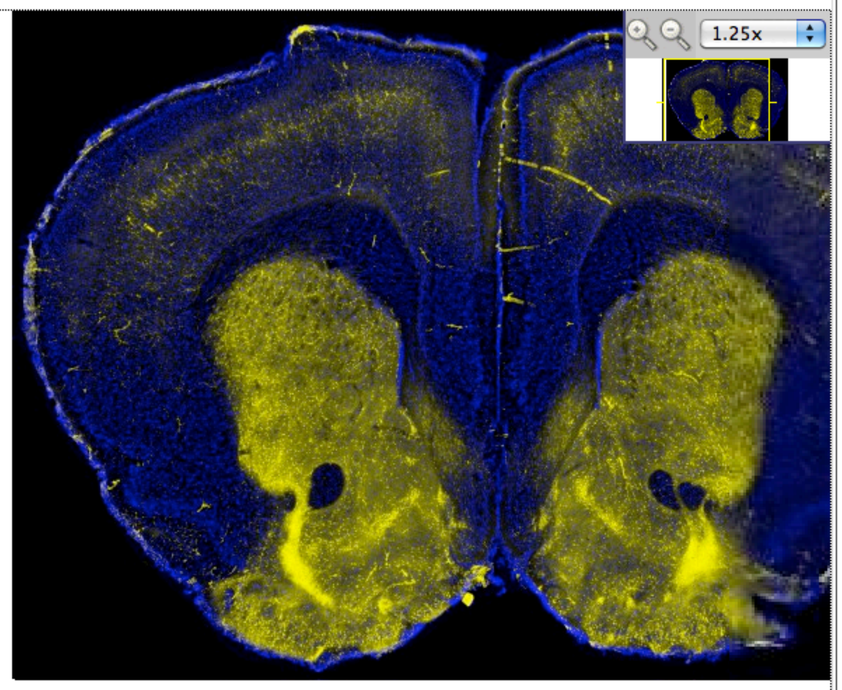
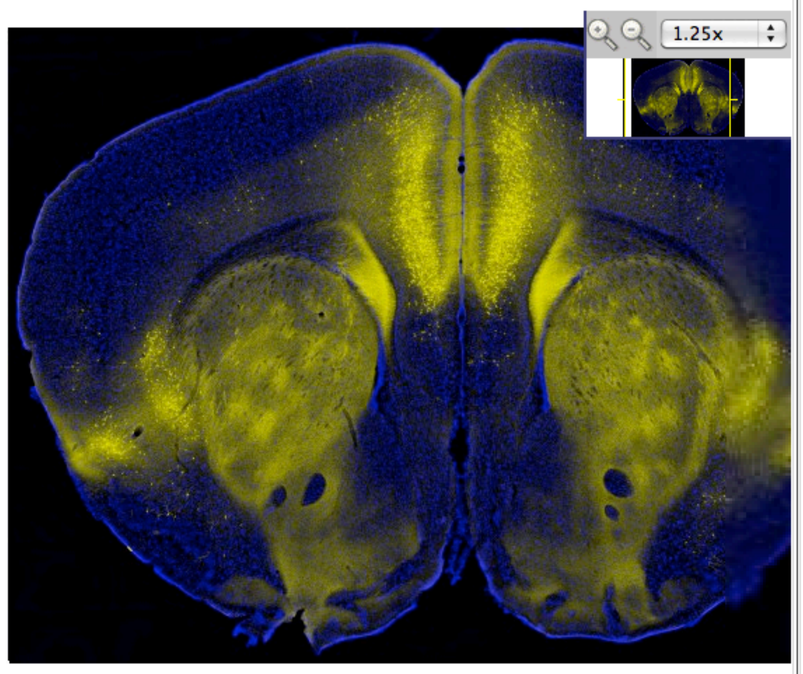


mc_Efr3a_NO108_4716_c20a_01by.pff Take a snapshot



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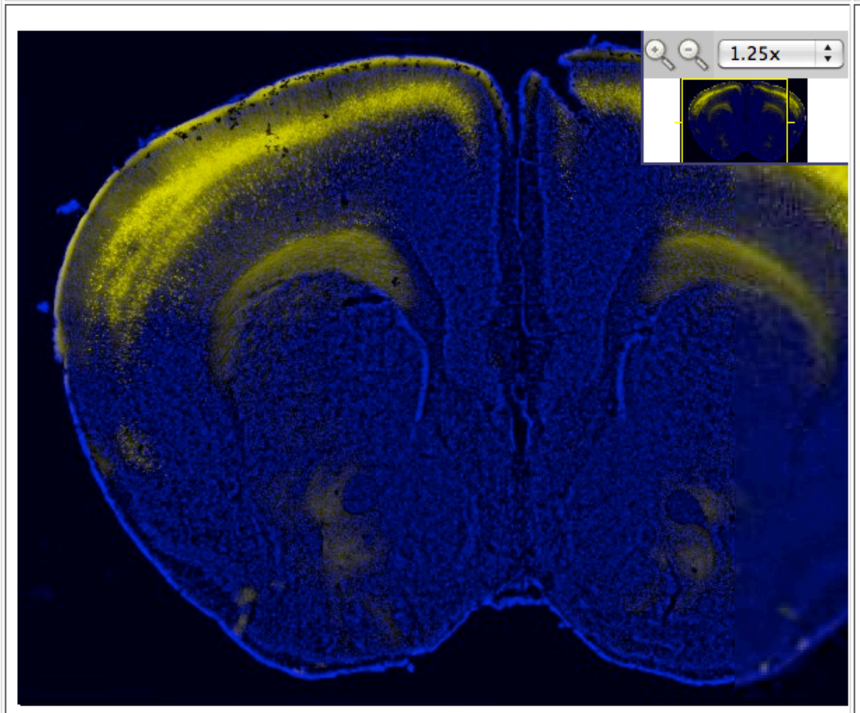

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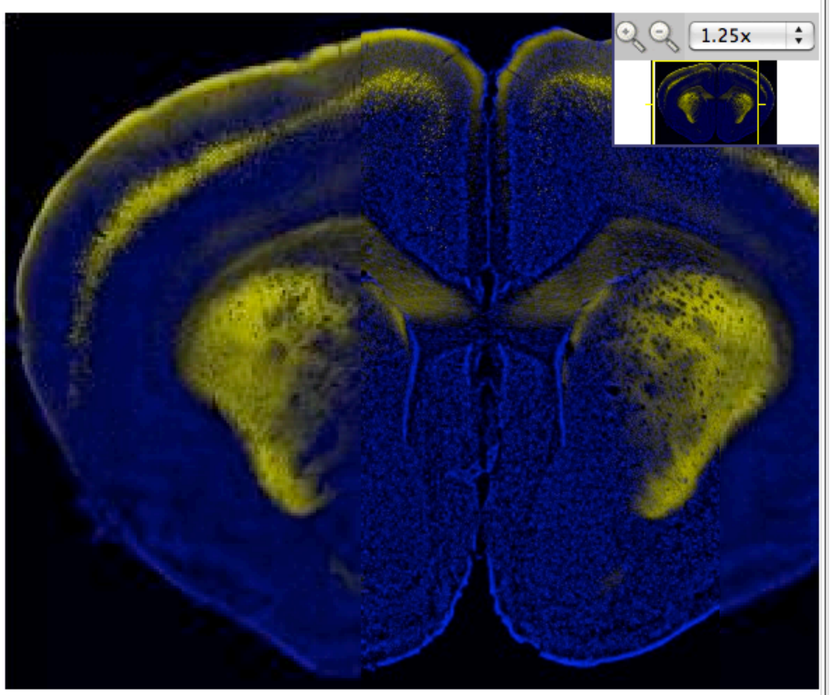

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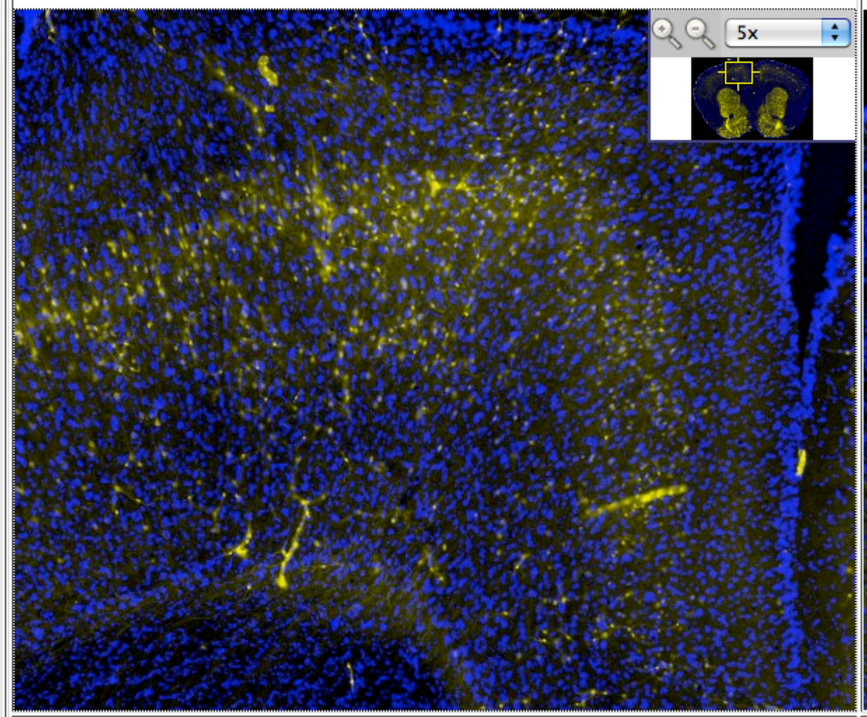

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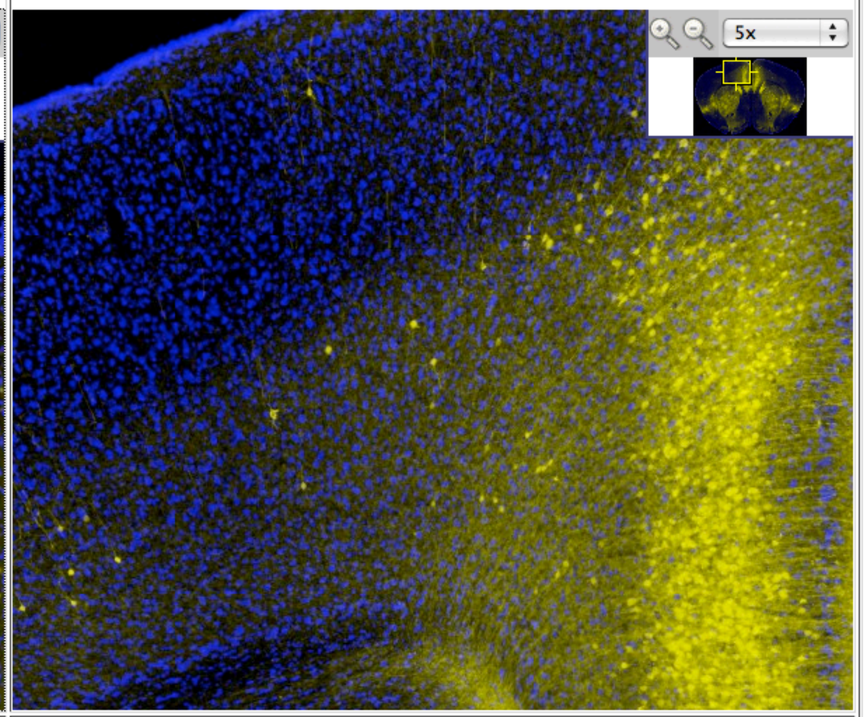

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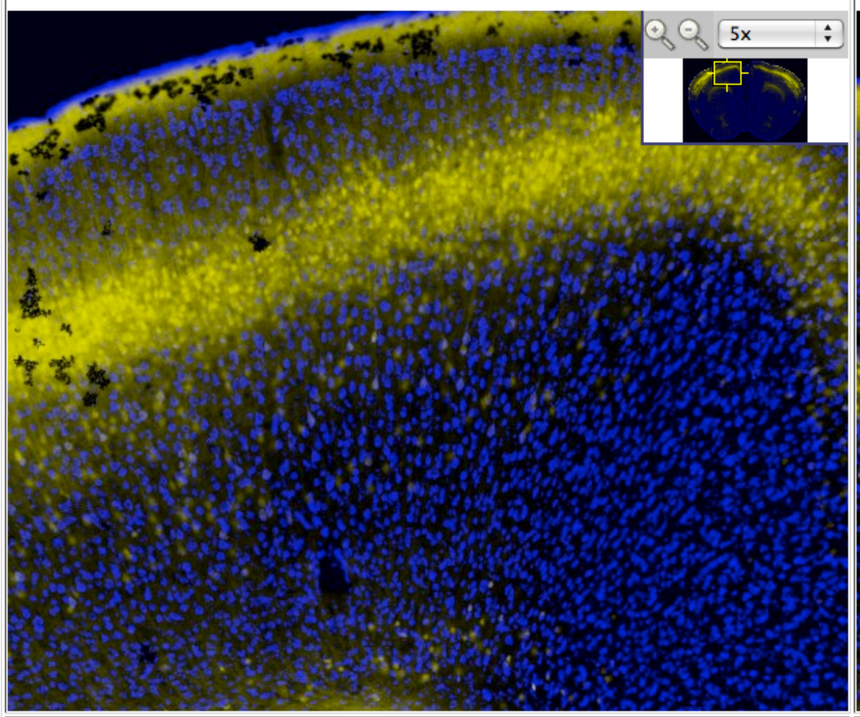

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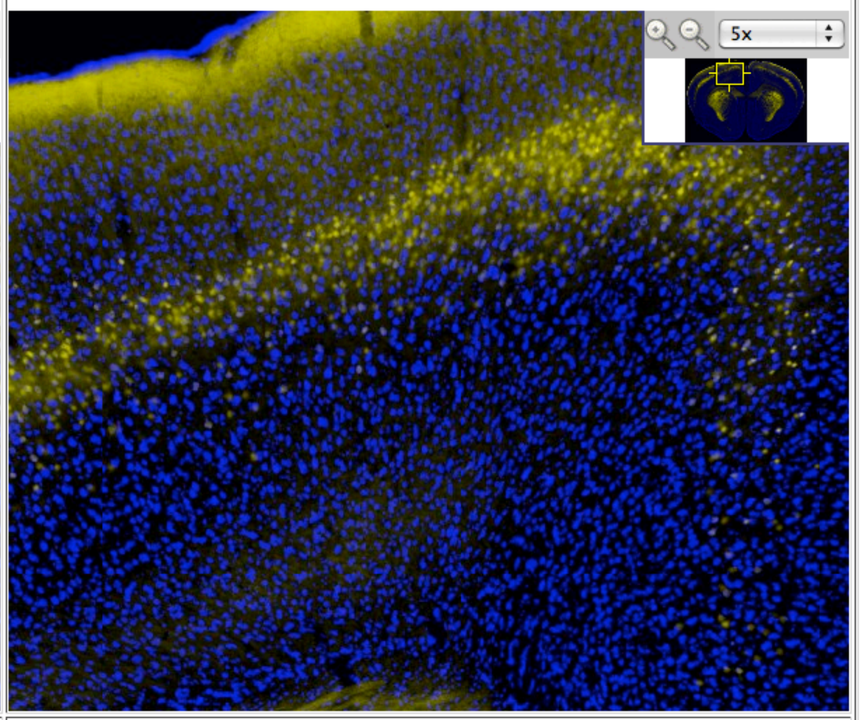

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Cre dependent AAV-expression vector injections are used to analyze axonal projections for Cre lines

KeyWord: 00b cortical tracing lists all tracing cases with cortical injections

Injection cases are listed by:
number (ie: 10T)
Cre line (ie: KL100)
case: (ie: 272)
00: tracer in yellow with nissl
01: tracer yellow
Cre imaged in red

describes neuron type labeled

Select Cre driver line(s): default lists all lines or select by Keyword for lines with expression in specific brain system

Select the coronal levels to display by checking box(es) : default provides 1 level in 5, All Levels option allows selection from all

KeyWord: 00b cortical tracing
KeyWord:
KeyWord:

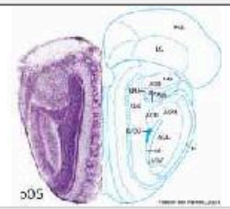
LINES Select All Unselect All

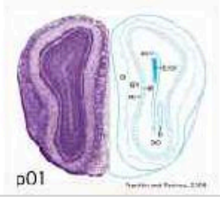
10T_KL100_272_00	PT and IT corticostriatal
10T_KL100_272_01	PT and IT corticostriatal
10T_KL100_673_01	PT and IT corticostriatal
13T_NF107_576_00	PT and IT prefrontal corticost...
13T_NF107_576_02	PT and IT prefrontal corticost...
21_NO108_717_01	PT corticostriatal
23T_OE25_454_01	PT corticostriatal
24T_KJ18_542_01	PT corticostriatal
30T_KH288_862_01	IT corticostriatal
31T_NP39_814_01	layer 2/3 prefrontal cortex
31T_NP39_818_01	layer 2/3 sensorimotor cortex
31T_PL56_258_01	IT corticostriatal
32T_PL56_216_01	IT corticostriatal
41T_OG1_336_01	matrix corticostriatal

Select All Unselect All

LEVELS	All Levels	DESCRIPTION
c5		c05 olfactory bulb
c10		c10 frontal cortex
c15		c15 frontal cortex
c20		c20 accumbens
c25		c25 striatum
c30		c30 septal area
c35		c35 globus pallidus
c40		c40 hypothalamus
c45		c45 thalamus
c50		c50 hippocampus
c55		c55 midbrain
c60		c60 substantia nigra
c65		c65 colliculus
c70		c70 dorsal raphe
c75		c75 PPN
c80		c80 brainstem
c85		locus coeruleus
c90		c90 cerebellum
c95		c95 cerebellum
c100		

Place mouse over Level description to change image.





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Only two or four slides are allowed to be compared at any given time.

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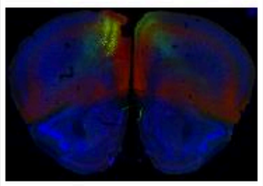
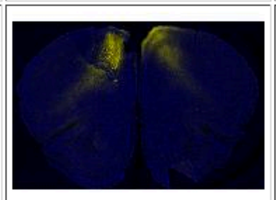
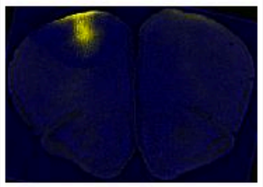
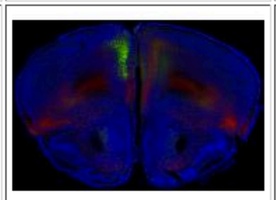
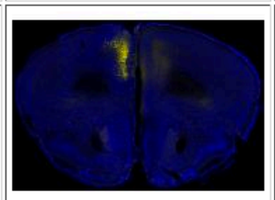
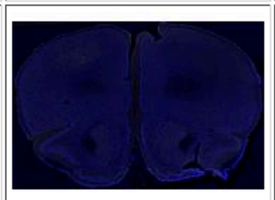
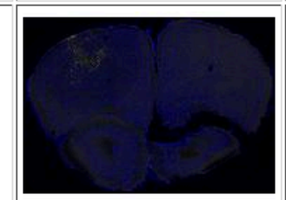
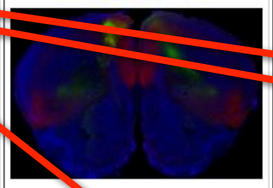
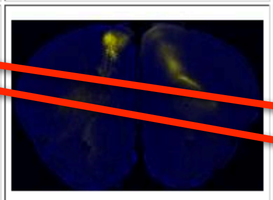
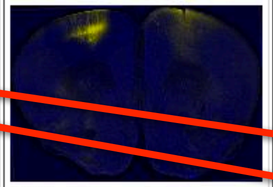
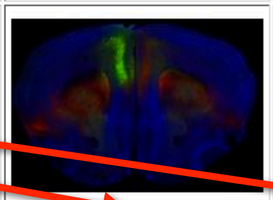
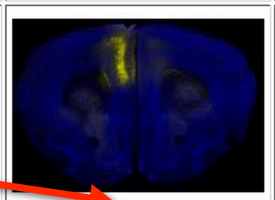
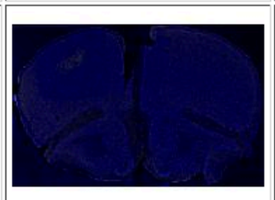
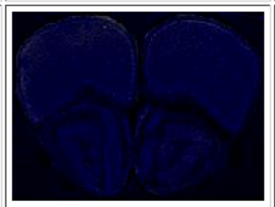
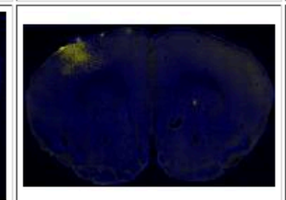
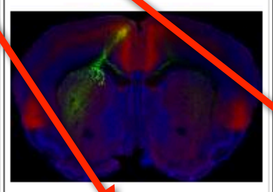
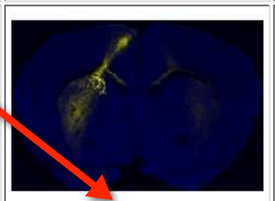
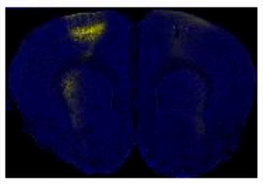
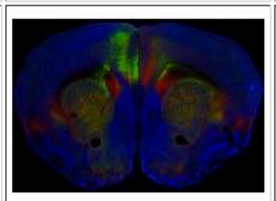
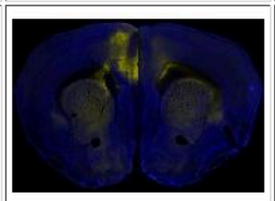
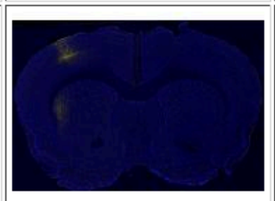
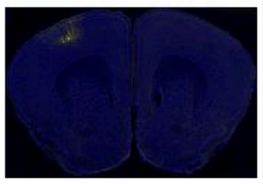
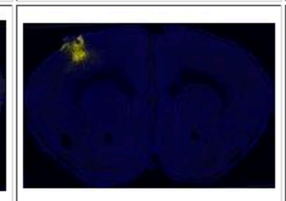
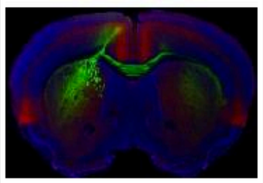
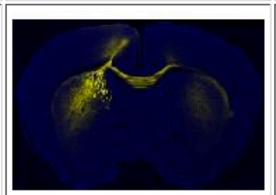
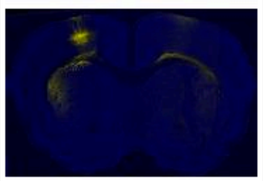
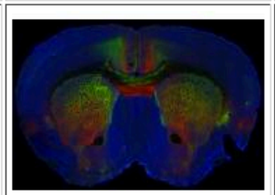
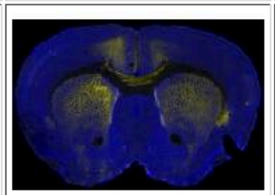
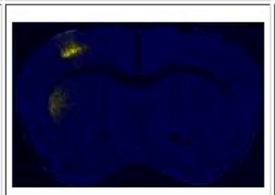
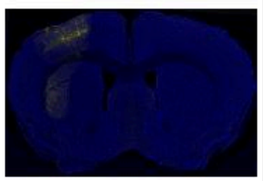
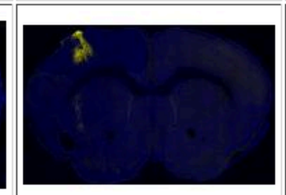
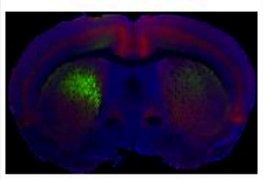
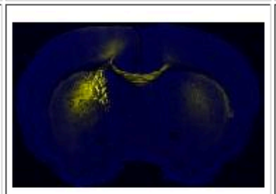
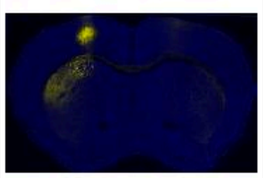
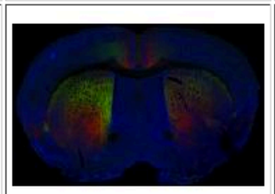
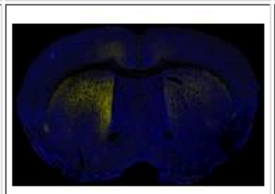
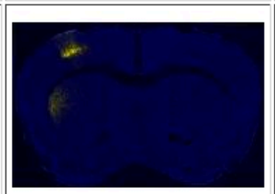
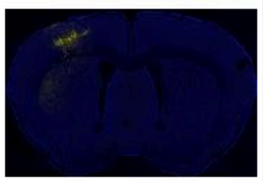
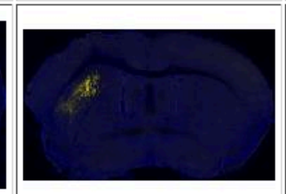
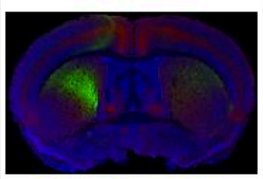
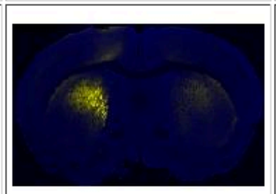
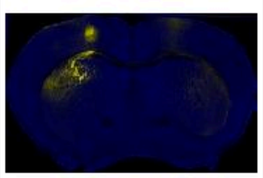
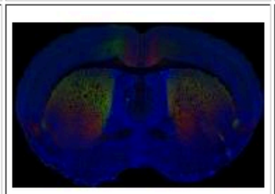
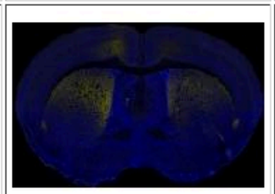
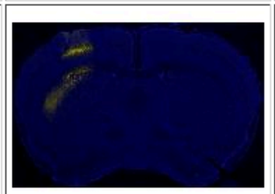
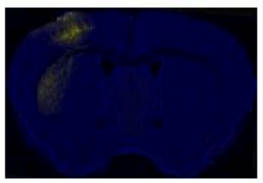
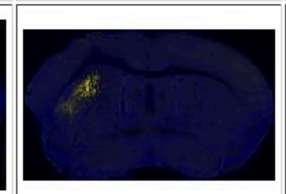
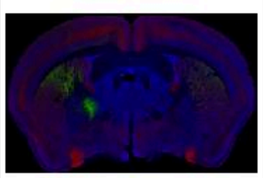
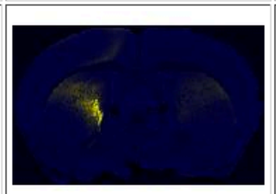
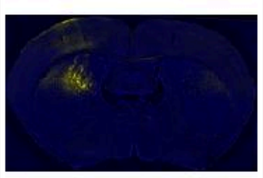
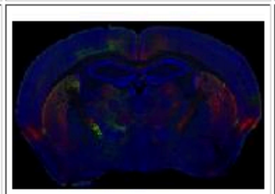
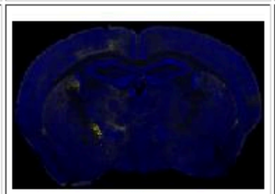
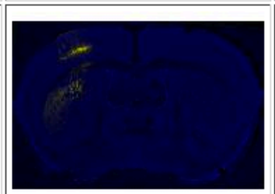
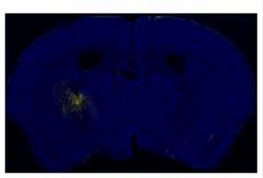
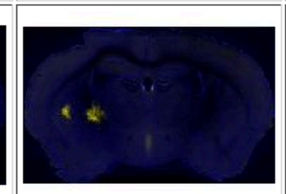
select images to compare injection sites viewed with and without Cre imaging

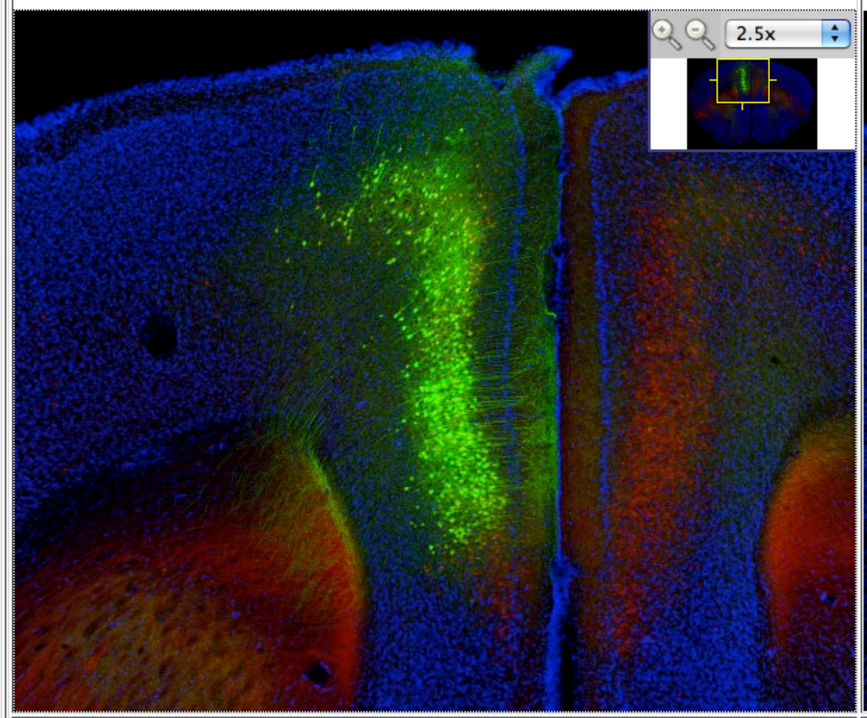
Level	10T_KL100_272_00	10T_KL100_272_01	10T_KL100_673_01	13T_NF107_576_00	13T_NF107_576_02	21_NO108_717_01	23T_OE25_454_01	24T_KJ18_542_01
c1 - c5	no image available	no image available	no image available	no image available	no image available	no image available	no image available	no image available
c6 - c10							no image available	
c11 - c15								
c16 - c20								
c21 - c25								
c26 - c30								
c31 - c35								
c36 - c40								

Grouping of Slides

Use the group slide button to link the slides.

Make sure that all linked slides have the same magnification.

Ungroup Slides



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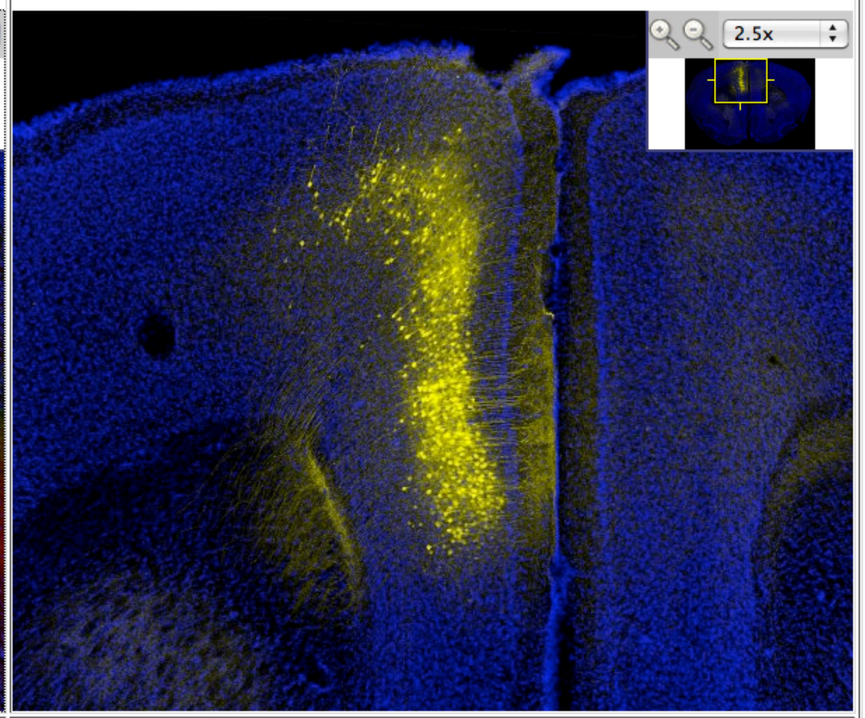
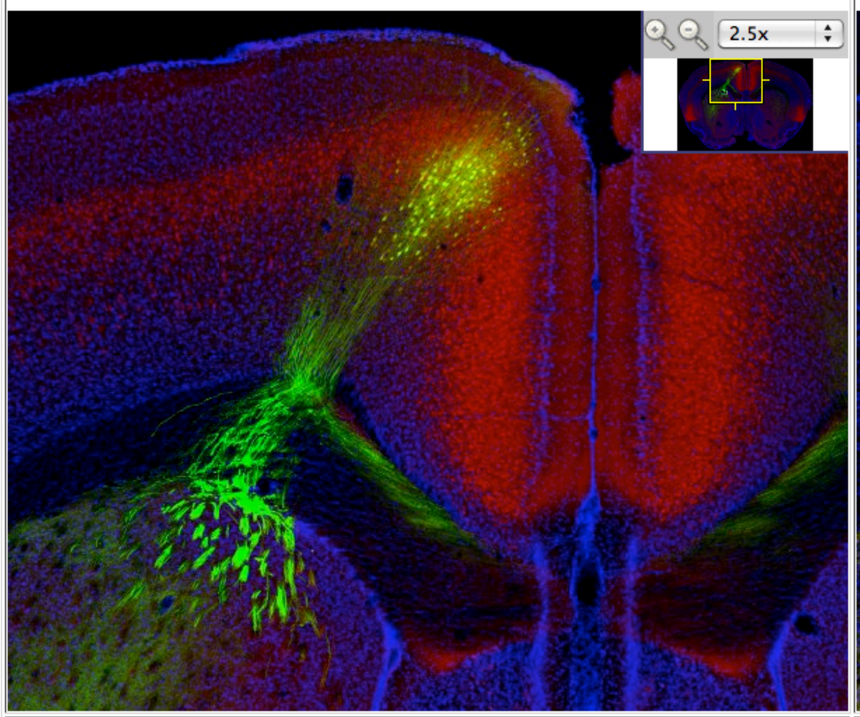


tr_NF107_576_10d_01_A_prefrontal_02.pff Take a snapshot



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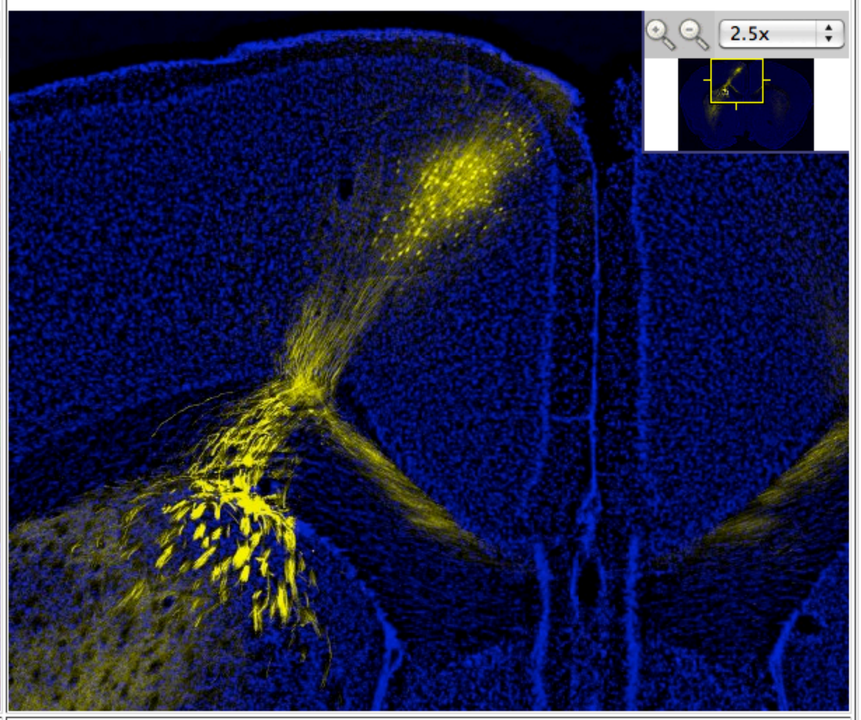

tr_KL100_2272_20b_02_B_accumbens_01ba.pff Take a snapshot

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Tracing cases with labeling in specific neurons are grouped with KeyWord:

01a cortical layer 5 PT and IT

Cases of Cre lines with cortical layer 5 neurons with expression in both Pyramidal Tract (PT) and callosal or intertelenchephalic (IT) neurons

Other Cre lines with expression selective to either PT or IT are listed under other Keywords

Cases of injections into different cortical areas are listed by Keyword as well

Select Cre driver line(s): default lists all lines or select by Keyword for lines with expression in specific brain system

Select the coronal levels to display by checking box(es) : default provides 1 level in 5, All Levels option allows selection from all

KeyWord: 01a cortical layer 5 PT and IT

KeyWo

rd:

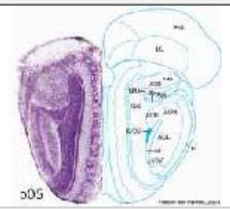
INES Select All Unselect All

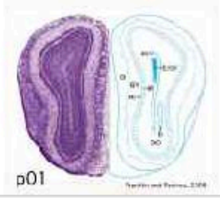
- 10T_KL100_272_00 PT and IT corticostriatal
- 10T_KL100_272_01 PT and IT corticostriatal
- 10T_KL100_673_01 PT and IT corticostriatal
- 13T_NF107_576_00 PT and IT prefrontal corticost...
- 13T_NF107_576_02 PT and IT prefrontal corticost...

Select All Unselect All

LEVELS	All Levels	DESCRIPTION
c5		c05 olfactory bulb
c10		c10 frontal cortex
c15		c15 frontal cortex
c20		c20 accumbens
c25		c25 striatum
c30		c30 septal area
c35		c35 globus pallidus
c40		c40 hypothalamus
c45		c45 thalamus
c50		c50 hippocampus
c55		c55 midbrain
c60		c60 substantia nigra
c65		c65 colliculus
c70		c70 dorsal raphe
c75		c75 PPN
c80		c80 brainstem
c85		locus coeruleus
c90		c90 cerebellum
c95		c95 cerebellum
c100		

Place mouse over Level description to change image.





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Results display lines in columns

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Only two or four slides are allowed to be compared at any given time.

Compare Selected Slides

Clear all Selections

Level	10T_KL100_272_00	10T_KL100_272_01	10T_KL100_673_01	13T_NF107_576_00	13T_NF107_576_02
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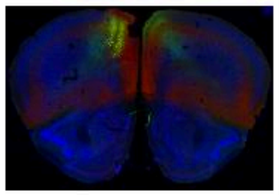
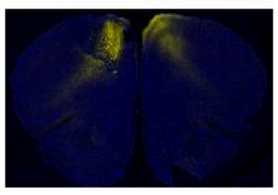
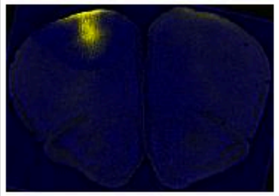
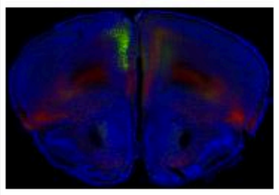
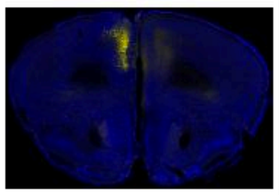
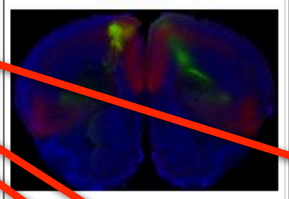
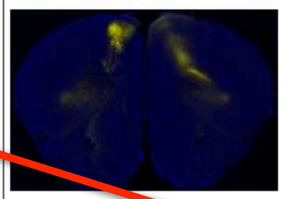
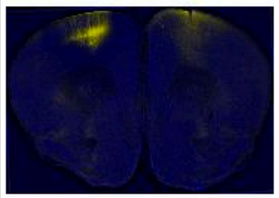
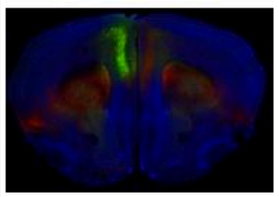
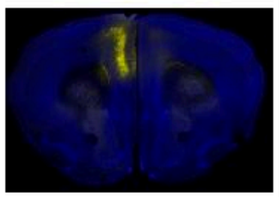
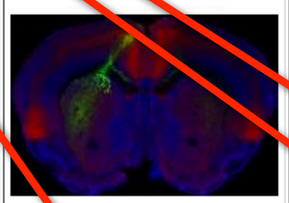
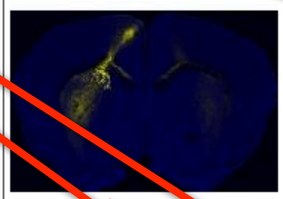
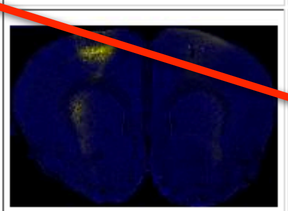
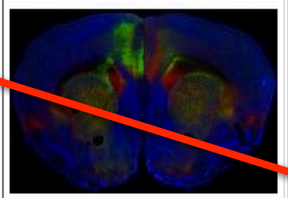
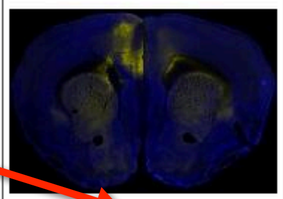
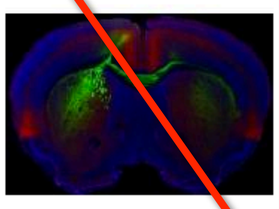
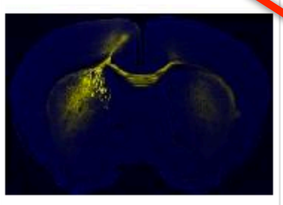
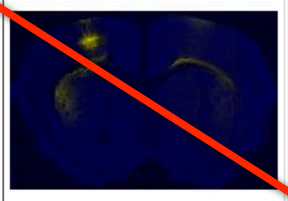
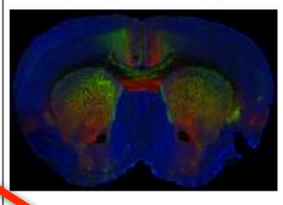
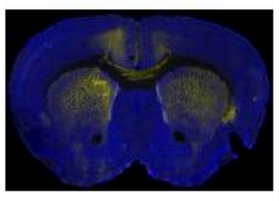
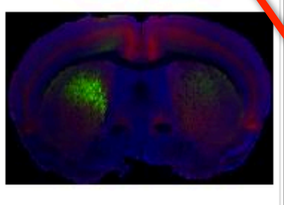
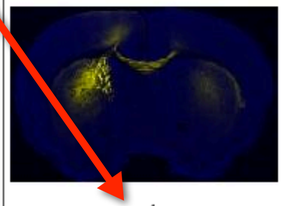
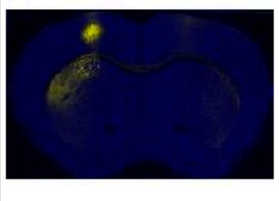
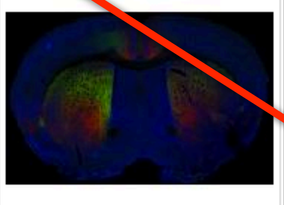
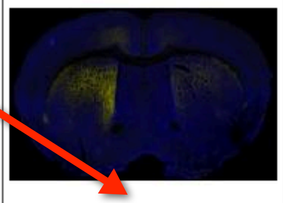
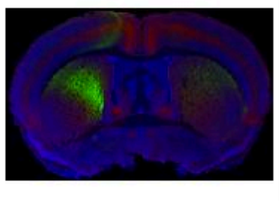
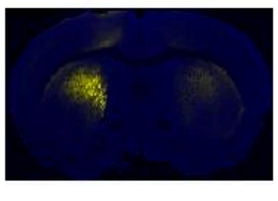
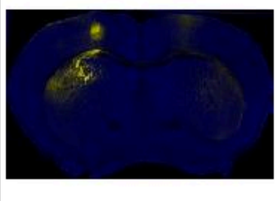
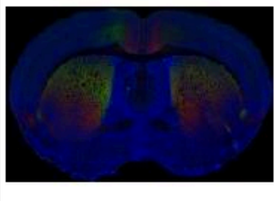
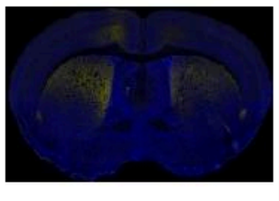
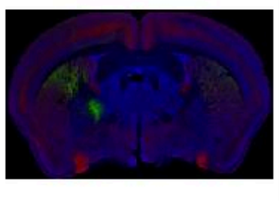
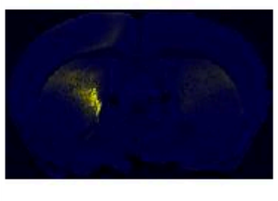
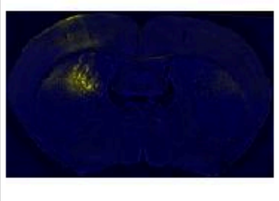
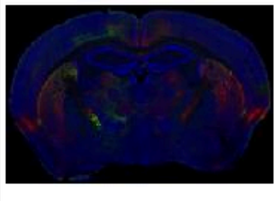
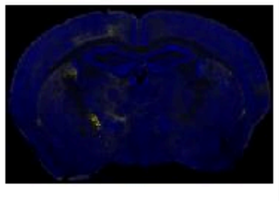
c6 - c10	 ☐	 ☐	 ☐	 ☐	 ☐
c11 - c15	 ☐	 ☐	 ☐	 ☐	 ☐
c16 - c20	 ☐	 ☑	 ☐	 ☐	 ☑
c21 - c25	 ☐	 ☐	 ☐	 ☐	 ☐
c26 - c30	 ☐	 ☑	 ☐	 ☐	 ☑
c31 - c35	 ☐	 ☐	 ☐	 ☐	 ☐
c36 - c40	 ☐	 ☐	 ☐	 ☐	 ☐

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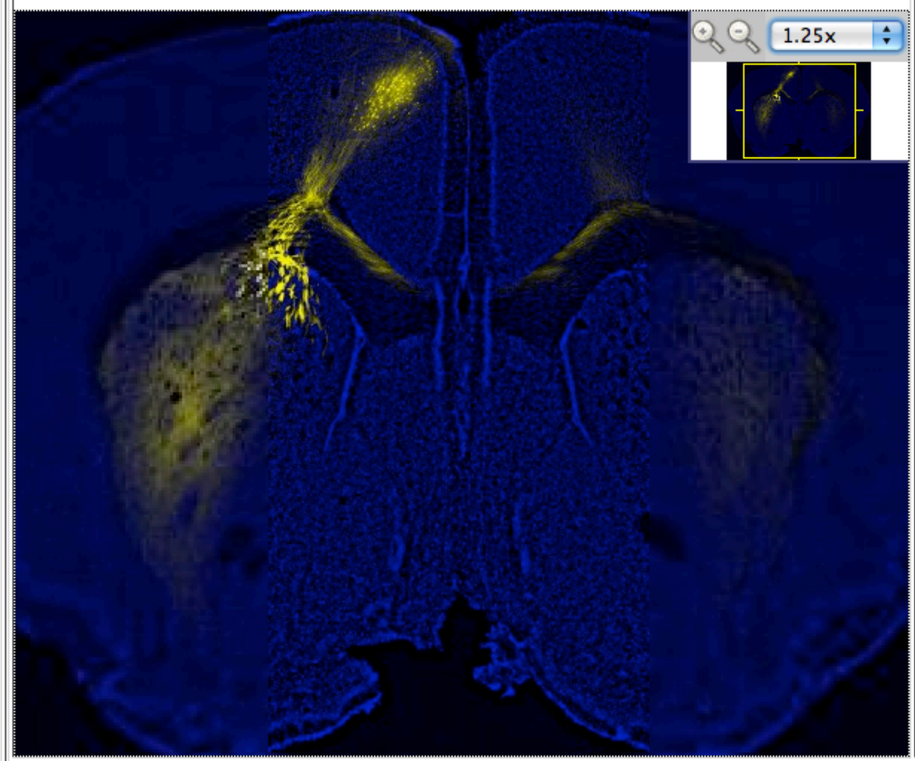
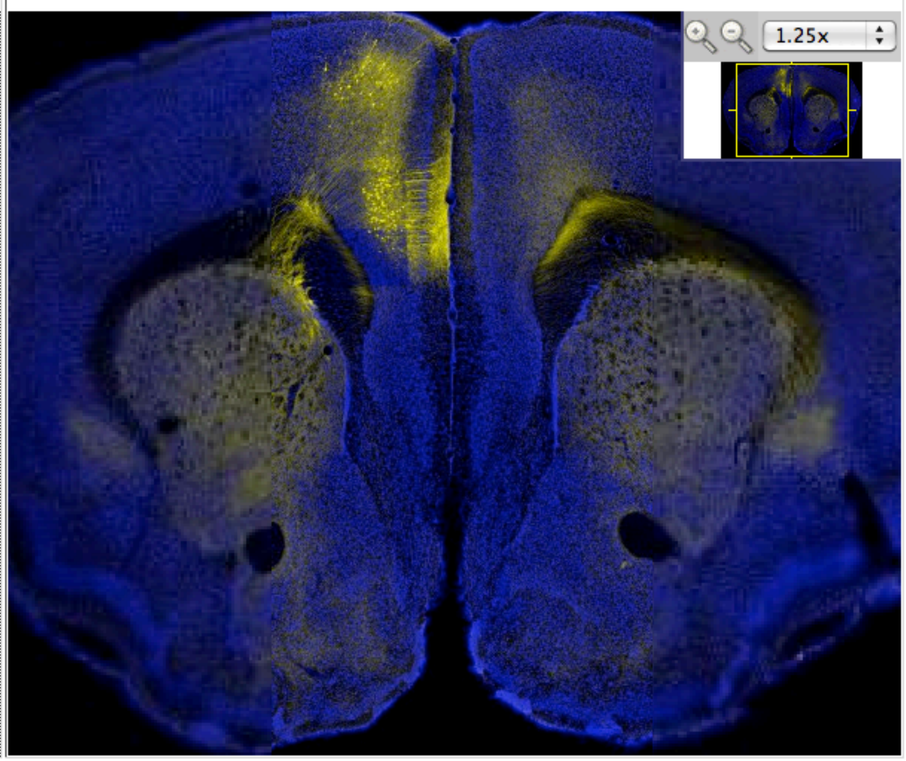
Ungroup Slides



tr_KL100_2272_20b_02_B_accumbens_01ba.pff Take a snapshot



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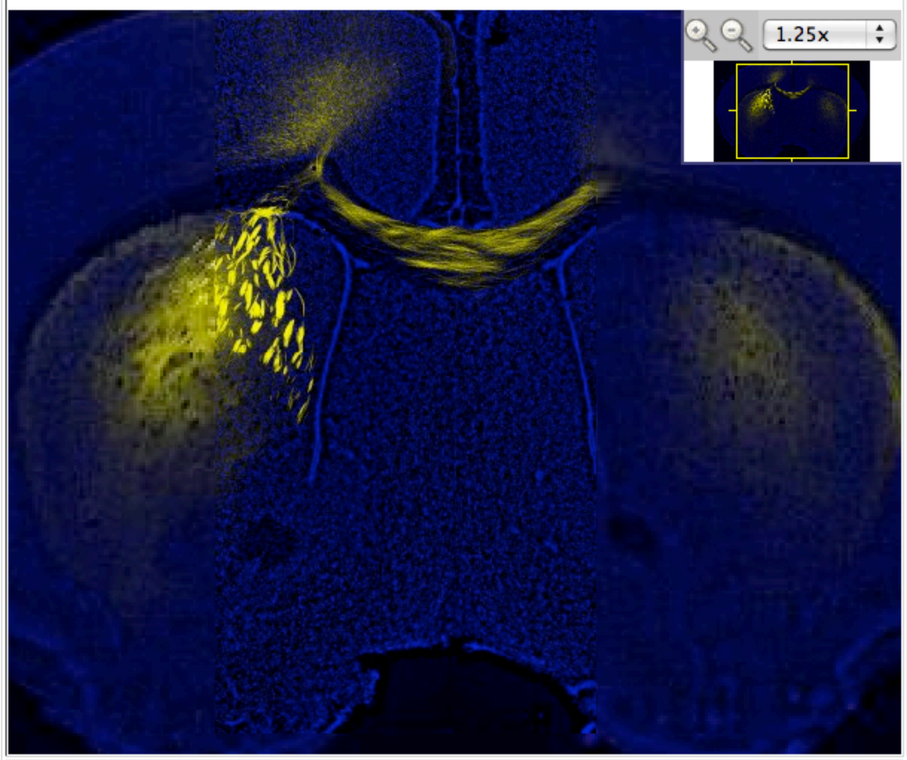

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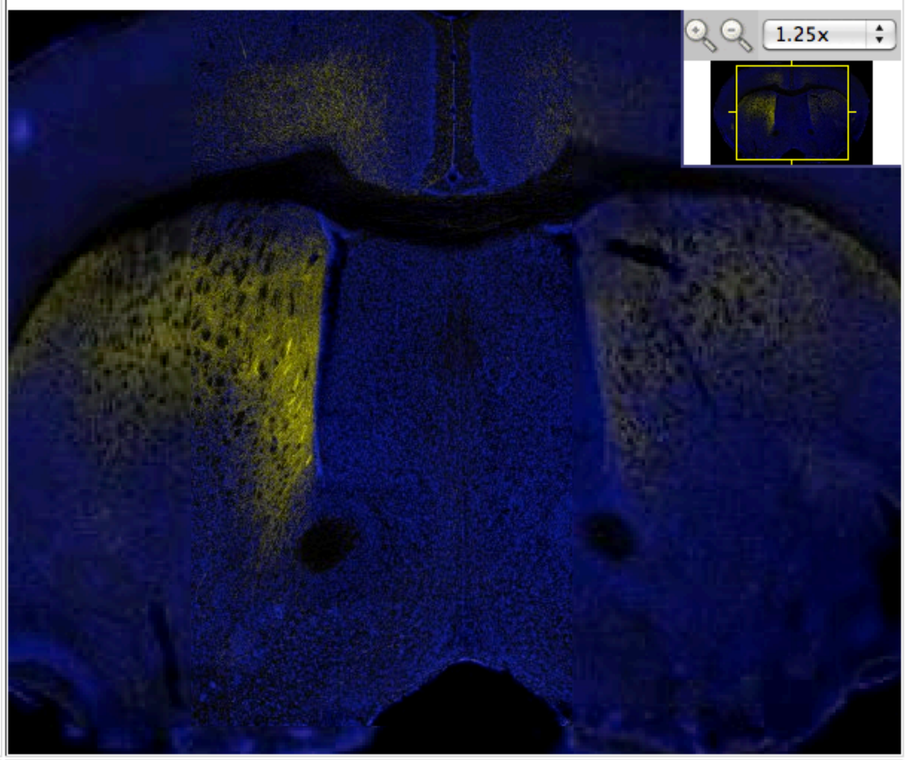

tr_NF107_576_30c_04_B_striatum_02.pff Take a snapshot